N
135 oil field which was discovered near Yümen in northwest Kansu
N during the latter part of the last war. Though several wells
[315] had been drilled and a small refinery plant established, oil
[489] production was never large due to shipping and transportation
[499] difficulties. (It might be noted that construction of the Kansu-Sinkiang Railway has been completed up to Yümen in July 1956. Tank cars may now replace trucks in the transportation of Yümen oil.) Despite these adverse factors, the Peking Government's planned economy gives top priority to the development of the known and the search for the unknown
N mineral wealth of China's Northwest.
315 Thirteen construction projects were completed in the Yümen Oil Field, China's biggest oil center, in the spring of 1955. A number of these projects now enable Yümen to produce
N eighteen percent more heavy lubricating oil and fifteen percent
316 more kerosene. (NCNA April 22, 1955). A large coal field was discovered in Kansu in April, 1955. It is reported the new discovery with a total of approximately thirty-two million metric tons is four times as large as the A-kan-chen colliery of Kao-lan (Lanchou) county, one of the major coal mines in the province.

S Work has been started by three oil prospecting teams sent
N to Sinkiang and Chinhai provinces by the Northwest Geology
315 Bureau under the Ministry of Geology. The prospectors are
[654] operating in Turfan and Dzungaria Basins, Sinkiang and in Tsaidam, Chinahai, to locate oil-bearing structures, oil shales, heavy feldspar and other minerals. (NCNA April 19, 1955). One of the plans for 1955 was to complete the prospecting of several oil-bearing structures in the Turfan Basin and obtain the data to design a modern shaft mine in the Urumchi coal field (American Consul General, SCMP, June 1-30, 1955). In addition, rich coal deposits have been discovered in North Sinkiang, particularly in the Ili Valley.

According to 1955 reports, new oil fields were discovered and drilled, e.g., at Tu-shan-tzu, south of Wu-su, and new
S coal fields were discovered in Sinkiang. Up to now, eight coal
N fields are being worked along the foothills of Tien-shan in
316 Sinkiang, which form one of the largest coal fields in China, ranking third among all the provinces. In coal reserve, Sinkiang is next only to Shansi and Shensi. The present coal reserves of Sinkiang are estimated at 35,040 million metric tons and can last for three hundred years at the present daily output rate of 320,000 tons.

Iron ore and ferro-metals like tungsten, manganese, molybdenum and nickel, as well as some non-ferrous minerals, like gold, platinum, copper, lead and zinc, and aluminum have been discovered and some even worked, especially in the province of

S N 316 [648] Sinkiang. The discovery of uranium and some other fissionable materials has been reported there. While rumors that Sinkiang is being built up into an ataomic arsenal for Russia remain to be confirmed, nevertheless it seems to be of particular strategic importance in the building up of a joint Sino-Soviet Inner Asian fortress.

S N 315 [648] Under a previous Sin-Soviet agreement concluded in 1937, the U.S.S.R. carried out prospecting and drilling in regard to petroleum exploitation. Fields were discovered in several localities, and a refinery was built at the Wu-su field, which, completed in 1940, had a daily capacity of a thousand barrels. This refinery was closed, however, in 1943. The largest field discovered to date, some forty miles in length, is located at An-chi-hai. No estimate of reserves is available at present, but on the basis of known fields and producing wells, Sinkiang has China's most extensive and abundant reserves, far outstripping those of Shensi, Kansu and Szechwan. Moreover, the oil from Sinkiang bores is reportedly of better quality than that found in other provinces in the Northwest.

S 315 316 648 Before the Sino-Soviet Agreement of Moscow on March 27, 1950, the mineral exploitation of Sinkiang was carried out sporadically and on a very small scale, with inefficient local mining methods predominating. Under the terms of the 1950 Moscow Agreements, a joint Sino-Russian petroleum company was formed with Russian-supplied technicians and equipment to undertake prospecting, surveying, working, and refining or petroleum and gas. Two other similar corporations were also organized to explore and exploit the non-ferrous and rare metals. By agreement the products of the corporation were to be divided equally between China and the U.S.S.R., as well as running expenses and profits. Leadership of the corporations was to be assumed by representatives of the two contracting parties in rotation for periods of three years and the corporations were to be staffed by an equal number of citizens from each of the two countries. The agreements were supposed to be valid for thirty years. (China Weekly Review, July 1, 1950, p. 82). It has been reported that all three Sino-Soviet joint corporations have been transferred to Chinese ownership, although with Russian advisers, since the beginning of 1955. At the same time, the Peking Government, together with Sinkiang authorities, sent out three large survey teams to search for new mineral deposits.

N 135 Northwest China has a great variety of minerals, only a few of which have been even partially developed. In addition to the rich oil fields of both Kansu, Sinkiang, and possibly Shensi, and the abundant coal deposits of these three provinces, other recently discovered minerals are as follows: rich copper deposits

N
135 in Kansu province; in addition, bornite, presumed to be very rare in the eastern hemishpere, has been discovered in southern Shensi province, leading to the belief that China may have rich additional bornite deposits. (China Monthly Review, May, 1953, p. 75.) In addition, several new copper deposits were found at Pai-cheng, Urumchi, Kashgar and Ili in Sinkiang province.

S
135 Rich iron ore deposits have been discovered with a proved reserve of as much as 47,537,000 metric tons in Sinkiang, sixt among all the provinces. (1945 Mining Report, China Geological Survey). In addition, some new iron ore deposits were found in Urumchi, Kucha, Pai-cheng, Wuka, Ta-cheng, and I-ning. Together with the discovery of some high quality tungsten ore in Wen-chuan of Sinkiang and some manganese ore in Kan-ku and Yung-teng of Kansu, Sinkiang possesses practically all the basic elements for the development of iron and steel industries.

N
S
135 There are many inland lakes and dried up lake basins all over the northwest provinces, among them the Tsaidam of Chinghai and Tarim of Sinkiang, two of the largest inland drained basins in the world. They provide the basic sodium salts. The almost inexhaustible and widespread salt and soda deposits in Kansu and particularly in parts of Ninghsia, Chinghai and Sinkiang together with the nearby rich oil fields provide a sound basis for the development of chemical industries.

While the mineral resources of northwest China are still being surveyed and their actual extent is not known, the outlook

N
[131] appears promising, particularly in the province of Sinkiang.
[161] All in all, northwest China with an area of 412,159 square miles and a population of 35,359,525, endowed with mineral wealth, has great prospects of becoming one of China's major industrial centers in the future.

B. The Principal Minerals

N
S
1. Fuel and Power

a. Petroleum and Oil Shale

• 315 Until recently, oil refineries in China have been crude, most of them having been manufactured locally; the only ones

N
S
of any size are located at Shih-you-ho in Kansu and at Tu-shan-
[439] tzu in Sinkiang. New refinery equipment was ordered from America at the end of the war, which provided a modern installation capable of handling greatly increased production and making oil products of a much better grade from the Shih-you-ho plants at the Yü-men field in northwest Kansu. Some similar modern refinery equipment has been bought from the Soviet bloc, reportedly Poland, Czechoslovakia and Rumania, for the

N 315 new oil plants at Tu-shan-tzu in Sinkiang. Undoubtedly, the
S [315] exploitation of the Yü-men oil field of Kansu has been considerably increased in the last two years. At a conference on petroleum research, called in May, 1954, by the Ministry of
N 315 Fuel, Popoff, a Russian professor, laid great emphasis on the
648 development of Yü-men oil fields, where Russians have been
177 working side by side with German, Czech, and Rumanian oil experts (KM Oct. 1, 1954). Towards the end of 1953 the Russian Atlas (sic!) was experimenting there on an improved method of oil exploitation which was to be introduced in 1954 (PD Feb. 9, and June 23, 1954).

N 315 654 Special emphasis on oil prospecting and drilling are given by the Communist Government. Throughout the nation, geological surveying and prospecting plans since 1953 have been the most inttensive in China's history. Total Government investment in surveying in the Northwest in 1953 was nearly seven times more than the previous year. Twice as many oil wells were planned to be sunk in 1953 as compared to 1952, while work on other mineral reserves topped previous years' quota by thirty-three percent.

The bureau in charge of prospecting and surveying mineral reserves in the Northwest trained nearly 2,000 workers in drilling, surveying, drawing, and analysis in 1953. (Geological Report, China Monthly Review, May, 1953).

N 315 The first drilling for oil was made some sixty years ago at Yen-chang in northern Shensi province. During the Anti-Japanese war, China spent large sums to equip the China National Petroleum Corporation's field at Yü-men in Kansu. At present, the major production is at Shih-you-ho near Yü-men in the most northwestern part of Kansu at the foot of
N [133] the Nan-shan. There the possible oil-bearing formations extend 700 miles, with a width of some tens of miles. Seepages are known in four localities, but only a few anticlines have
N [433] been developed. Drilling started in 1939, and the yield amounts to several thousand barrels a day. The oil has a fifteen percent paraffin base. Prospects in Sinkiang appear even more pro-
S 315 mising, with oil on both sides of the Tien-shan Mountain Range.
[648] Drilling at Wu-su, west of Urumchi and in the northern foot-
[433] hills of Tien-shan began in 1935, under Soviet direction. Its current yield is only a few hundred barrels a day. However, some new fields have been discovered and new wells drilled in other parts of the province.

N 315 S [315] Recently, both oil-extracting and refining industries have been growing rapidly. Refining facilities in northwest China with its five oil regions distributed in north Shensi, West Kansu, central Kansu, and Ho-hsi corridor and Sinkiang have been substantially extended. Petroleum development is one of

315 the factors that should soon turn the once poor and desolate expanses of the Northwest into a major industrial area. At the National Petroleum Exhibition, held in Peking in December 1951, an illuminated chart showed that the Northwest is one of the principal sources of oil in the country. (China is rich in oil, China Reconstructs, No. 2, May-April, 1952).

Oil Development in Shensi:

In 1925, Mr. Brouyard, Chief Engineer of the Cheng-tai Railway (a branch of the Peking-Hankow Railway - from Cheng-ting in West Hopei to Taiyuan, the capital of Shansi province), in making a survey for a proposed line from Taiyuan to Sian, the capital of Shensi, explored the petroliferous region east of Yenan, along the Yen-shui and the ravines, locally known as "petroleum ravines," above and below Yen-ch'ang in northern Shensi. An oil plant has been established in Yen-ch'ang, but the cost of transport has confined its market to the adjacent area in Shensi. The present plant at Yen-ch'ang is small and poor, even for handling the small amount of crude oil produced there. Some deposits of oil shale are found in the southern part of the province, in the districts of Pao-chang and Chung-shan.

[131] The North Shensi Basin lies in the north of that province, roughly between thirty-five and forty North Latitude and 107 and 111 East Longitude. The boundary on the east is the Huang-ho or Yellow River, and the oil seepages lie in that part of the basin south of the Great Wall in the valleys of Yen-shui, Lo-ho, and Wei-ho rivers. In Yen-ch'ang, from [648] 1907 to 1914, the Chinese drilled several shallow wells, and from 1914 to 1916 the Standard Oil Company of New York drilled two wells to 1,950 feet and 2,700 feet. This company also drilled five other wells in the basin in the three years they were there, the deepest being 3,500 feet, but results were not satisfactory. After this the Chinese drilled some thirty more wells, but none yielded much oil. Because of the smallness of the seepages and the unfavoragle geological structures, the basin cannot be considered promising. (See Table 1.) 3/4

Oil Development in Kansu:

The oil reserves of Kansu province are among the richest in the country. China's biggest oil field, Yümen, is located in the northwestern part of the province, and the largest production at present comes from the Shih-you-ho plant. A long sinuous basin stretches some 700 miles northwest with a width of some 100 miles in the east part and from a few miles to sixty miles in the west. Mountain masses border the basin on the northeast [133] and southwest. The oil beds are located in loose sandstones and conglomerates of upper Cretaceous and lower Tertiary age. Possibly the oil originated in Permian or Jurassic formations,

3/4. [See p. 128--Analyst]

315 and more oil sands may be found in the sands between the
[133] source beds and the present shallow reservoirs, which would increase the reserves a great deal. Oil seepages have been discovered at Wen-chu-shan, south of Chung-yüan (36.37 by 104.32), Shan-hsien-tzu, south of Yung-teng (36.44 by 103.24); Ching-tu-chen, north of Yung-cheng (38.17 by 102.07) and near Yü-men (40.15 by 97.13). Only one oil field has been developed in this basin - the Shih-you-ho, southwest of Yü-men at approximately 39.46 by 97.33 and near the last seepage.

[648] In 1937 the Standard-Vacuum Oil Company sent a party of geologists in to examine the field. After a study of its report the Chinese Government decided to develop the Shih-you-ho anticline. Actual drilling started in February, 1939, on the crest of the anticline near the oil seepage and sent to 492 feet and produced twenty barrels a day from two small oil sands. A second well nearby to a depth of 656 feet gave thirty-five barrels a day. These wells were drilled on the floor of the canyon by two small cable rigs and a small boiler. Then two rotary drills with Diesel engines were brought in from the coal mines. Nineteen holes in all were drilled up to
[433] March, 1944, the deepest being near 1,400 feet. Number 18 well at 1,313 feet came in with 10,000 barrels a day, but blew out cratering the hole. On account of small refinery capacity, only 4,000 barrels of crude could be handled a day. Until a larger and better refinery can be brought in, the wells now drilled supply the crude oil needed. The oil is a paraffin base, with 15.5 percent paraffin content, which is difficult to handle at low temperatures in that part of the country. It is impossible to estimate the potential reserves at present, but the extent of the anticlinal structure offers great promises. A geologist who visited the field in 1943 said that there may be twenty-six to forty-six million barrels of recoverable oil in the pool.
[133] Within the radius of eighteen miles of this field are three other anticlinal structures in the Tertiary sediments that warrant investigation. Other likely structure will probably be discovered as the basin is thoroughly examined.

315 The production of oil at the Yü-men field increased to
433 4,000,000 gallons in 1946. With the completion of thirteen construction projects in early 1955. its production has been considerably increased as well as greatly improved in the refining process of the oil produced. According to press reports, the Yü-men oil fields reported over-fulfillment of production targets for the first quarter of 1955. The oil fields administration stated that output targets for gasoline, kerosene, diesel, and lubricating oil and other items were surpassed by seven to fifty-one percent in the first quarter. (NCNA, April 14, 1955). It was also said that a number of the newly-completed projects

N
315
[433] now enable Yü-men to produce eighteen percent more heavy lubricating oil and fifteen percent more kerosene. (NCNA April 22, 1955).

Numerous new oil-bearing structures and seepages have recently been discovered around Wu-chung, Ku-yüan, Hua-ting and some other districts in Eastern Kansu province. A recent report stated that preparations are now being made to drill a deep test well on the biggest structure which extends over 120 square kilometers around Wu-chung. (See Table II.) 1 A

S
315
[135] Oil Development in Sinkiang:

To the west of Kansu lies Sinkiang, a province rich in minerals, particularly oil. Recent prospecting reveals that Sinkiang has excellent oil possibilities.

There are two basins, the Dzungarian in the north and the Tarim in the south. Seepages have been found in both and the prospects of finding petroleum are good. The Dzungarian Basin is enclosed between the Tien-shan Range on the south and the Altai mountains in the north. Seepages are reported at Ching-shih-hsia near Chuguchak (Tarbagatai or Ta-cheng) (46.45 by 83.40), near Kuldja (Ili or Ining) 43.48 by 81.17), at a place southwest of Sui-lai (44.21 by 86.19) and at Urumchi (Tihua) (43.48 by 87.36). The Tu-shan-tzu field is about five miles southeast of Wu-su, (location approximately 44.15 by 85.0). In the district of Wu-su there are also oil seepages at Ssu-su-mu, Chiang-chun-kou, An-chih-hai-ho, and Ta-shih-tan.

The Tarim Basin lies south of the Tien shan and north of the Kunlun and Altyn Tagh mountains in southern Sinkiang. It is occupied by the great Takla Makan Desert, one of the most barren spots on earth. A small, undeveloped oil field is said to exist at Hei-tzu-erh-po near Kashgar (39.27 by 75.59), and there are oil seepages at Su-ta-che, Shui-mo-kou, Tun-ho, Ssu-cha-kou, Wensu Aksu (41.06 by 79.58), at Shang Wu-pu in Sha-che, Yarkand, Hsiao-kuai in Sha-wan and at Kucha (41.40 by 83.04). From the geological formation, which consists of a thick series of Tertiary strata containing marine Eocene beds in the western part of the basin and which underlie the basin, it is thought that the oil possibilities are good. Much work will have to be done to map the structures.

S
[133]

Drilling has been started at Hung-tung-shan in Kucha, at Hsi-ho in Tarbagatai (T-cheng), Tu-shan-tzu south of Wu-su, Urumchi, Turfan, and Kashgar (Shu-leh). Petroleum is obtained to the west of Urumchi, where the oil is scooped from the surface of water with buckets. The petroleum is of black color. Petroleum can also be found from Shih-ho to Manas in the Urkashar Mountains, and also between the caravan stations of Kurtu Anchihai-ho in the district of Wu-su. The richest

1, A [See p. 128--Analyst]

N
• 315 oil shales, heavy feldspar, and other minerals. By mid-June,
654 1955, as a result of an air survey to prospect for oil in Sinkiang, in addition to ground teams with magnetic and gravitational methods in the search for oil, the secret of a petroleum river has been leaked out from a state oil refinery. (American Consul General, SCMP, June 1-30, 1955; June 16, p. 3-5), and ten promising areas for petroleum
N production are discovered.
315 Oil prospecting in Chinghai:

No actual drilling and production of oil are reported from Chinghai, but the province has been prospected extensively for oil since early 1955. Promising discoveries of oil-bearing structures have been increasingly revealed.

N
[654] Two oil-prospecting teams were sent to Chinghai under the supervision of the Ministry of Fuel Industries and the Ministry of Geology. A new oil field was first discovered southeast of Hsi-ning, the capital of Chinghai province. Oil wells for trial production are reported to be sunk there. (NCNA, April 26, 1955). New Oil-bearing structures have just been discovered in the Tsaidam Basin in Changhai province. (Am. Consul General: SCMP June 1-30, 1955, p. 27).

The Tsaidam Basin is one of the concentration points of present day oil prospecting and more oil bearing structures have been increasingly discovered in the area. (NCNA, June, 1955). In order to do the prospecting work, members of the Youth Prospecting Corps are dispatched there, and they
N have reported new discoveries of oil structures in the basin.
[654] Following the recent discovery of the four layer oil structure by the fourth Sub-company of Number 632 Company of the Northwest Geological Bureau, the Number 104 Company under the Chinghai Petroleum prospecting Bureau of the petroleum prospecting General Bureau discovered at the foot of the northern slopes of the Kunlun mountains, a three layer oil structure in May, 1955. (Am. Consul General: SCMP June 1-30, 1955, p. 28). As to the exact locations of these new discoveries and their possible reserves, no data are available. Recent reporters however say that the newly discovered oil deposits in the Tsaidam Basin and at Karamai Northwest of Urumchi have even greater prospects than the Yü-men field (N. Y. Times, August 15, 1956).

N b. Coal
135 Northwest China is particularly rich in coal. About twenty-nine percent of China's coal reserve lies in Shensi alone, formerly considered second only to its neighbor Shansi, if
S claims of recent Manchurian discoveries are discounted).
[135] With some new discoveries, Sinkiang claims a coal reserve next only to Shansi and Shensi provinces. Thus the Northwest

315
433
1331

TABLE I. Distribution of Petroleum Wells in Shensi Province.

| Location | Year Drilled | Depth, meters | Past Production | Lat. & Long. |
|---|---|---|---|---|
| Yung-ping, 57 km. NW of Yen-ch'ang | 1914-16 | 667 | small | 36.57 x 109.57 |
| Yen-ch'ang 158.3 meters west of city's West Gate | 1907-36 | 83-923 | 1-6 bbls/day | 36.30 x 110.08 |
| Fu-shih (Yenan) 4 km. NE of Fu-shih | 1914-16 | 1,000 | only show | 35.31 x 108.86 |
| Chung-pu 25 km. WSW of Huang-ling (Chung-pu) | 1914-16 | 833 - 1,182 | only show | 35.12 x 109.03 |
| Tung-kuan 22 km. NW of Tung-kuan | 1914-16 | 933 | no data | 29.17 x 106.35 |

TABLE II. Distribution of Petroleum Wells in Kansu Province.

| Location | Year Drilled | Depth, meters | Past Production | Lat. & Long. |
|---|---|---|---|---|
| Lao-chun-miao, Chiu-ch'uan county, 70 km. W of Chiu-ch'uan city | 1943 | | 776,076 bbls in 1942 | 39.46 x 97.47 |
| Tun-huang 20 km. NW of Tun-huang city. | 1943 | 100-475 | | 40.19 x 94.32 |
| Shih-yóu-ho SW of Yü-men | 1937 | 492 ft. to 656 ft. | 20 bbls/day 35 bbls/day | 39.46 x 97.33 |
| | 1944 | 1,400 ft. | 10,000 bbls/day | |
| | 1944 | 1,313 ft. | | |
| Yü-men, near city | 1944 | | 4,000,000 gal in 1946 from the Yü-men Field | 40.15 x 97.13 |

1: Washington S-4 (no date) 1956 AFL3 Northwest China AFL3

4. The leather Industry

282 There were eleven tanning or leather goods factories in
(433) Shensi and twelve in Kansu. Their total capacity was 180,000 pieces of hide per year, which amounted to only eighteen per-cent of the total production of hide in the Northwest.

Two factories were partly equipped with machinery. One was the Northwest Chemical Leather-making Factory in Sian, which had mechanical press, mechanical brush, sprayers, and its own generator. It used more than one thousand pieces of raw hide per month, and its output included shoes, belts, and other leather goods. The other was the Lanchow Leather-Making Factory, which had mechanized sander, sewing machines, pumps, and other equipment. Its products included leather and leather goods. The rest were small factories, using very simple tools.

5. The flour industry

256 There were eight modern flour mills in Shensi and two in
(433) Kansu, with a total capacity of 6,500,000 bags per year. On the basis that one bag of flour requires fifty-four catties of wheat, it was estimated that the total quantity of wheat used by the flour industry was 3,500,000 piculs per year, about 7.5 percent of the total production of wheat in the Northwest.

(433) The larger mills, such as the Hua-feng Flour Co. and Cheng-feng Flour Co. in Sian, and the Fo-hsin Flour Factory in Pao-chi, produce 3,000 to 5,000 bags per day. The rest were under one thousand.

6. Miscellaneous

388 (a) Soap-making. There were five small soap factories in
(433) Shensi and four in Kansu. The total annual output was some 35,000 cases, which satisfied only a small part of the demand for soap in the Northwest.

289 (b) Paper. Paper-manufacturing was one of the main handicrafts in the Northwest which may be found in many places, but details were not available.

339 (c) Cement. The first cement factory was established in
(491) Shensi in 1938, with a capital of CNC$200,000. It had nineteen kilns which turned out six or seven barrels a day. In 1939, another factory was built in Shensi, with a capital of CNC $2,000,000. Its capacity was around 18,000 barrels a year, but the quality of its products was very poor. Still another factory was under construction in Kansu, with a capital of 4,500,000. But up to the end of 1942, it had not yet begun production.

315 (d) Oil. Oil has been produced in north Shensi and Kansu for over a thousand years. But it was not until the early twentieth century that modern methods of extraction were used. Since then, five or six wells have been drilled in north Shensi. During the Sino-Japanese War, the Chinese government was very much

315 interested in the Yümen Oil Field. In 1940, one well was completed, and a small refinery was also built in Yümen.

668 47 175 B. The Communist Period

The Communist government has paid special attention to developing the industrial potential of the Northwest, in order to remedy the unbalanced industrial development in the past. Up to the end of 1955, the major accomplishments were as follows:

668 175 288 1. Shensi

The most important industrial development in Shensi under the Communist regime is its textile industry. According to an August, 1953, report, three new textile mills, presumably the Northwest Number 2, 3, and 4 Plants, and one dye mill were under construction in Central Shensi. At the same time, three other textile mill were expanded. When these mills are completed, the Northwest will have an additional 136,800 spindles and over 5,000 automatic looms. The total number of spindles will then be three times and the number of looms 4.4 times those of 1949. According to an April, 1956, report, the three mills have all been completed, and a Number 5 Plant, with 100,000 spindles, was under construction. By the end of 1957, the total number of spindles in Shensi will be approximately 300,000.

A sheet and towel factory, known as Huang-ho Textile Factory, was built in Sian, first of its kind in the Northwest. It is expected to supply the people in the Northwest with over two hundred thousand bed sheets and bed covers of different colors and designs and one hundred and thirty dozens of pillow cases and face towels every year. Since it started production in March 1955, it has shipped many of its products to the areas inhabited by minority peoples in Chinghai and Sinkiang.

668 175 In addition to the textile industry, they have built or expanded the following factories in Shensi:

[386] 1. A new paint factory in Sian is supplying more than fifty different products for the country's needs. This was completed in 1953.

[256] 2. A flour mill of unidentified capacity was also built in Sian during 1953.

[395] 3. The expanded Tien Chiang Instrument Manufacturing Factory started production January 1955. Its output trebled that of 1954. The instruments they made were for geological surveys.

[339] 4. A mechanized brick factory in Sian started production in April, 1954. It will turn out nearly one hundred million bricks annually. Up to June, 1955, it has already supplied ten million bricks to the construction of buildings in Sian.

*668 *175 316 5. The excavation of a new coal shaft near Sian started on Augus. 24, 1955, and is expected to be completed in 1958. It will become part of the Tungchwan coal mines.

*668 *175 315 2. Kansu.

The most important industrial project in Kansu is perhaps the Yümen Oil Field. Since the Communists took over, extensive reconstruction work has been carried out in this major oil center of China with the help of experts from the Soviet Union, Czechoslovakia, Rumania and East Germany. The Communists boasted that production has increased many fold. If [433] the index of production in 1950 was 100, that in 1951 was 140, and 1954 was 430. In 1955, they planned to produce thirty percent more crude oil than in 1954, and capital investment allocated for the sinking of new wells was twenty-five percent more than in 1954. Latest record of drilling is 234.3 meters in one day, and products include petroleum, kerosene, lubricating oil, diesel oils, tar and paraffin wax. The total output has never been revealed, but it is known that more than five thousand workers are employed.

*668 *175 The Communists have also paid attention to the development of industrial production in Kansu in general. In 1955, twenty-one state-owned or semi-state-owned factories and mines were built or renovated, and all of them are in operation. The [377] more important ones are as follows: (1) a power plant in Lanchou, [258] which increased the supply of electric power by fifty percent; [316] (2) six oil-extracting plants in Kuting and Wuwei, which, when fully completed, will increase the production of vegetable oil in Kansu nearly two hundred percent; and (3) five small coal mines, which increased the coal production by 88.2 percent over 1954.

[316] It was reported on April 4, 1953, that one of the country's largest copper deposits was found in Kansu, the Pai-yin-ch'ang copper mine, which they planned to develop under the first Five Year Plan as one of the major industrial projects in that [382] area. There is also a report that a refinery has been built in Lanchou. But details on these developments are lacking.

*668 *175 315 316 There are comparatively few industrial activities in Chinghai. However, with the development of the Chinghai-Tibet highway, the Communists are hopeful that rich oil and coal deposits may be found in the Tsaidam Basin. Tsaidam is one of the country's major areas scheduled for oil-prospecting in 1955, and drilling has already been started there. Besides, [491] mining of anthracite coal has begun in an undisclosed location in Chinghai, which was discovered by the builders of the Chinghai-Tibet highway in August 1953. Truck loads of the coal are now going regularly to Lhasa and other points along the new highway.

and is used mainly for wrapping. The annual output of the white flax paper is about 966,870 bundles, and that of black flax paper is 3,982,480. Part of this is exported to Ssechwan, Hankow and Anhwei.

(c) The "improved" paper. It is produced and consumed mainly in Kansu, at the rate of some 300,000 bundles per year.

(d) The "mulberry-skin" paper. It is produced and consumed mainly in Sinkiang, at the rate of some 565,977 bundles a year.

(4) Bamboo articles. A side-line of farmers, they are made in many places, especially in Hua-hsien and Han-chung, in Shensi and Min-hsien, in Kansu. The annual output is estimated as follows: (1)farming implements, 29,280 piculs, (2) sieves, 132,300, (3) large bamboo baskets, 480,000, and (4) small bamboo baskets, 27,000.

(5) Straw hats. Also a side-line of farmers, they are made in many places, especially in Feng-hsiang, Wei-nan, Lin-tung, and Chang-an, in Shensi. The annual output in Shensi alone exceeds 1,377,900 hats.

(6) Brooms. They are made mainly in the districts near Mount Chung-nan, such as Mei-hsien and Chang-an. The annual output exceeds 800,000 brooms.

(7) Straw mats. They are produced mainly in Sui-te, Shensi, Chang-i, Kansu and Ninghsia City, Ninghsia. The annual output exceeds 3,000,000 pieces.

(8) Wooden rakes. One of the main farming implements in the Northwest, they are made mainly in Chang-an, Pu-cheng and Tung-chuan, Shensi. The annual output is about 88,000 pieces.

(9) Iron utensils. They are produced mainly in Pao-chi and Feng-hsiang in Shensi, and Tienshui in Kansu. The annual output is about 76,000 counts.

(10) Carpets. Carpet-making is one of the main handicrafts in Sinkiang. The carpets come in various sizes, up to eight by sixteen feet. The annual output exceeds 10,000 square feet. Of that quantity, some six thousand square feet is exported to India, Afghanistan and Soviet Russia and the rest is sold locally or to other provinces in the Northwest.

6. Evaluation and Prospects.

For the time being, the Communists seem to have concentrated on two things in industrializing the Northwest, one being the cotton industry in Shensi and Sinkiang, and the other being the oil industry in Kansu, Sinkiang and Chinghai. From the economic point of view, these developments are not unnatural because Shensi and Sinkiang have been famous for their raw cotton, and the oil reserve in China is largely located in the Northwest.

While the present industrial development in the Northwest may not appear so impressive, this area will probably become

1: Washington S-4 (no date) 1956 AF13 Northwest China AF13

Sinkiang and Outer Mongolia have been re-opened for traffic. (See section Communications.) With these improvements in transportation, it is only logical to assume that trade in the Northwest must also have increased in volume.

Another important change is the increase of production of the Yümen Oil Field and the establishment of four new textile factories in Shensi (for details see section Industry). Although there is no information on the distribution of these products, it is reasonable to assume that most of them are intended for the consumption in the Northwest. If this is the case, the import of textiles and kerosene, which were two of the most important items of the imports of this region, must have been reduced.

Still another important change is the enlargement of cotton plantations in Sinkiang. It is reported that the China Cotton, Yarn and Cloth Company in Sinkiang-Uighur Autonomous Region plans to send five thousand tons of cotton to other parts of the country in addition to ensuring an adequate supply for local consumption. On November 3, 1955, the first cargo of cotton of Sinkiang was dispatched to Shensi for its textile industry.

B. Government Control

The Communist control of trade in the Northwest is more or less the same as that in other parts of the country. The main instrument of control is the state trading companies, which are in charge of wholesale trade and, together with the various co-operatives and mobile trading units, purchase of native products from this region. According to Communist reports, the six basic commodities in Sian, i.e., food, cotton cloth, edible oil, coal, tea and salt, have been fully monopolized by the state trading companies since June 29, 1955; and all private wholesale establishments dealing with those goods have been liquidated. More than one hundred members of the "capitalist side" were sent to reform camps, and the store assistants were either employed by the state trading companies or sent back to their native places to seek other employment. In the Sinkiang-Uighur Autonomous Region, the number of branches of state trading companies exceeded five hundred in 1954, about eight times as many as in 1950. They provide the people there with general merchandise, cotton cloth, oil and fats, petroleum, pharmaceuticals and stationary.

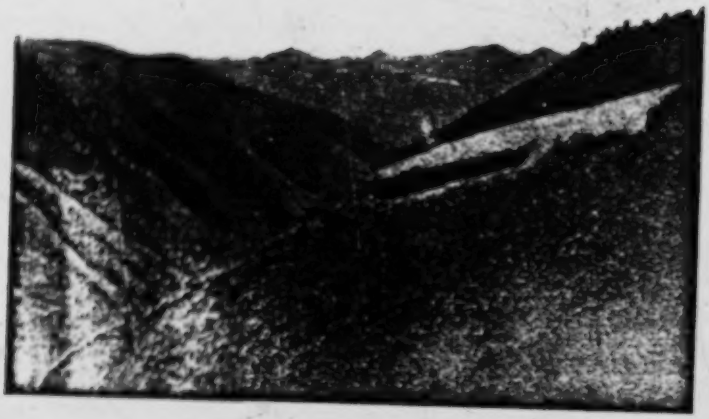
Aside from supplying goods on the wholesale level, the state trading companies have also undertaken to buy goods from this region. Among the goods bought in 1950 are: (1) wool, 23,000 catties, (2) hides, 800,000 pieces, (3) intestines, 1,270,000 pieces, (4) bristles, 280,000 catties, (5) tung oil, 4,500,000 catties, (6) medical herbs, 4,000,000 catties, (7) cotton, 800,000 *piculs and (8) grain, 130,000,000 catties (cf. The Native Products of the Northwest, preface, Sian, 1951).*

2: Teichman G-5 (1919) 1921 AF13 Northwest China AF13

PLATE XVIII

• 315

OIL WELL AT YENCH'ANG



IN THE MOUNTAINS OF E. SHENSI

[FACING P. 71]